

Rethinking Enterprise Search in a Web 2.0 World

Jayne Dutra

Enterprise Information Architect

DAMA International Symposium and Wilshire Metadata
Conference

Jet Propulsion Laboratory

California Institute of Technology

NASA

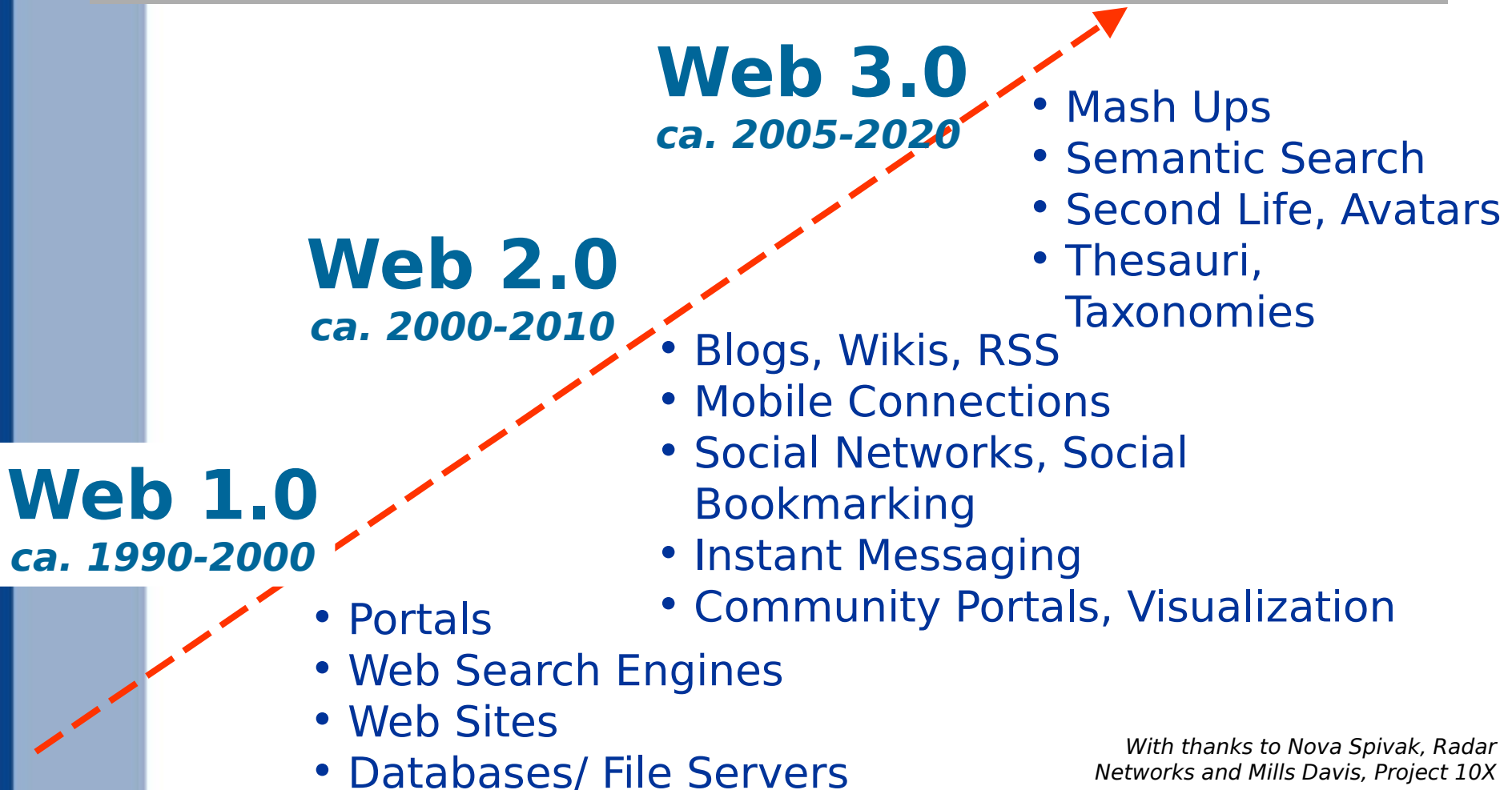
March 19, 2008



Agenda

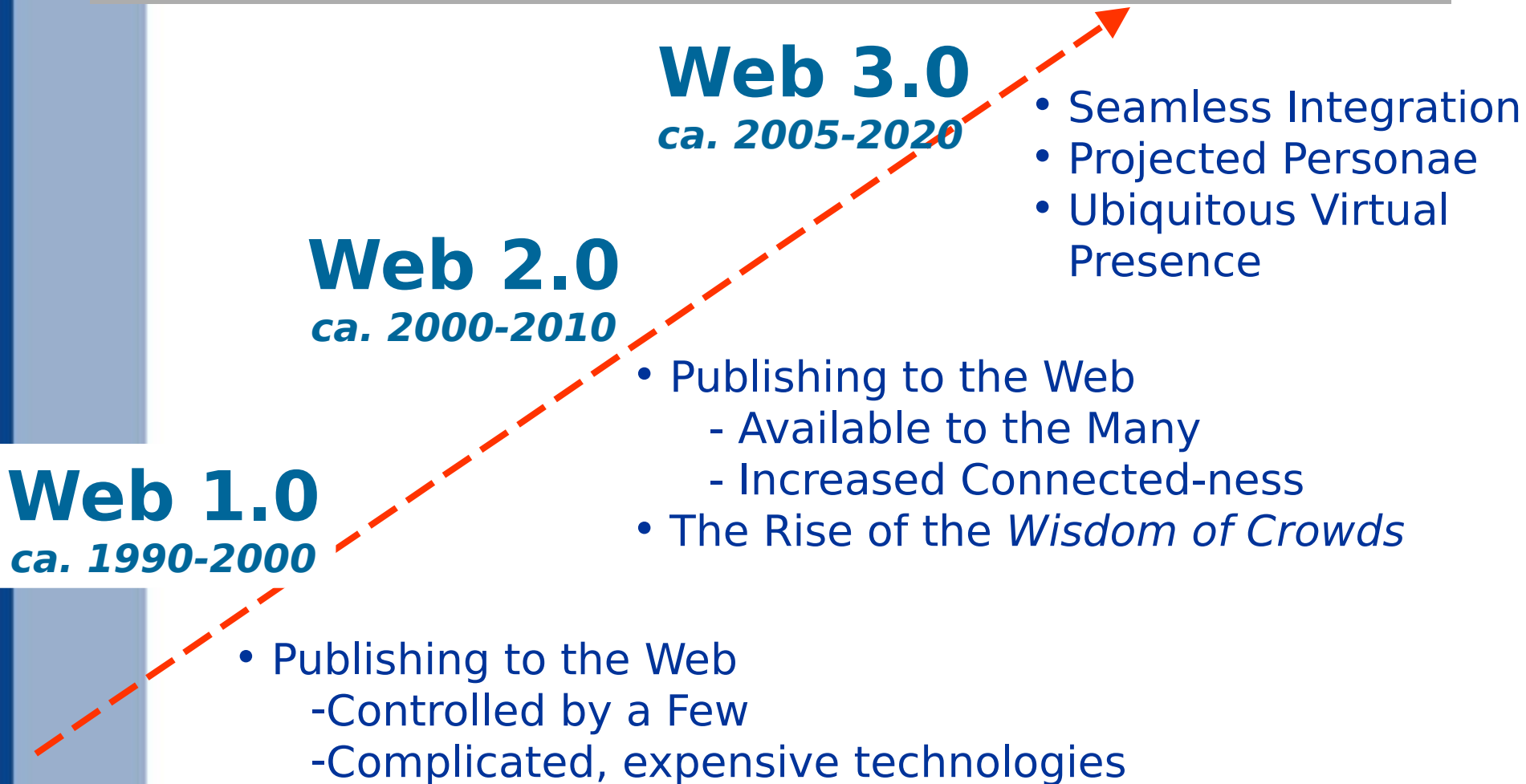
- Web 2.0 – Meanings and Implications
- Search 1.0 – *So Yesterday!*
- New Technologies
- Search 2.0
- Re-Imagining Enterprise Search
- Role of Data Reconciliation
- Next Generation and New Ideas

New Developments: Web 2.0



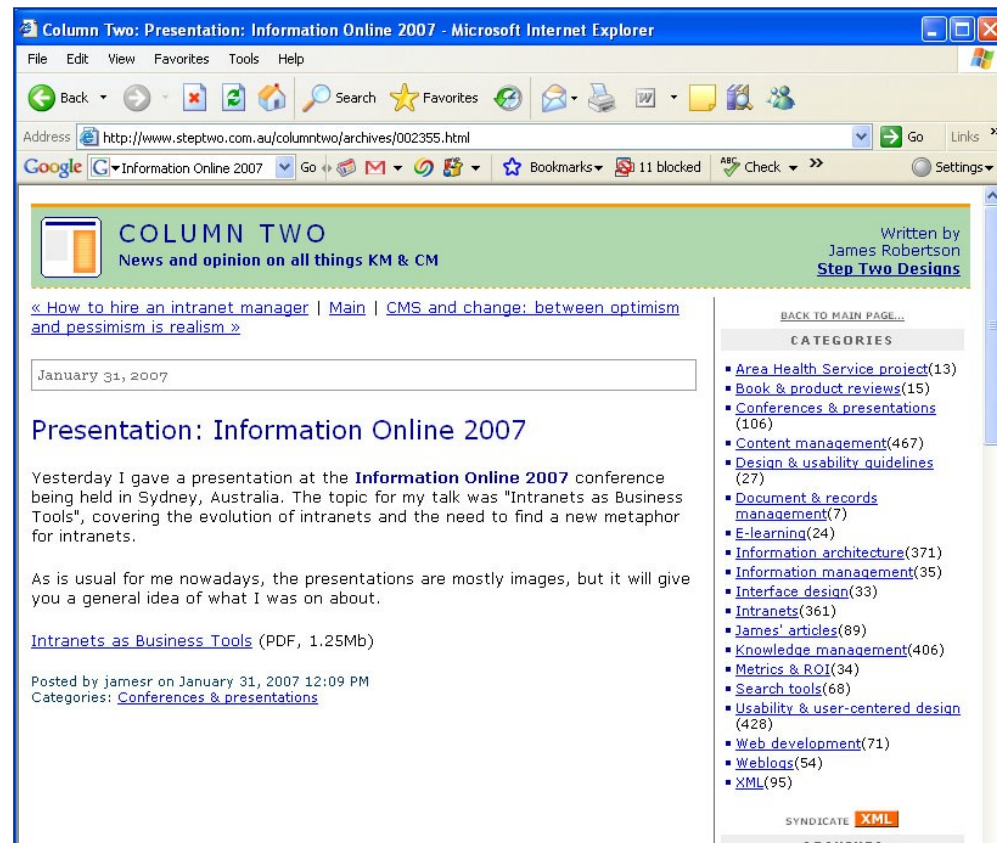
With thanks to Nova Spivak, Radar Networks and Mills Davis, Project 10X

New Developments: Web 2.0



The Socialization of the Web

- Increased connectedness of individuals
 - Blogs and wikis enable increased content and knowledge sharing
 - Enriching user experience
 - Example: James Robertson blog on Information Online Conference 2007 in Sydney, Australia



The Socialization of the Web: Blogs

Metadata Behind the Scenes:

- Relationships between events and content
 - Date and venue information
- Browse by Topic
 - Faceted navigation by subject category
- Social bookmarking
 - Let an expert be your guide

The screenshot shows a Microsoft Internet Explorer browser window. The title bar reads 'Column Two: Presentation: Information Online 2007 - Microsoft Internet Explorer'. The address bar shows the URL 'http://www.steptwo.com.au/columntwo/archives/002355.html'. The browser's toolbar includes buttons for Back, Forward, Stop, Home, Search, Favorites, and a menu for 11 blocked sites. The page content features a header for 'COLUMN TWO' with the tagline 'News and opinion on all things KM & CM'. Below the header, there is a navigation bar with links like '« How to hire an intranet manager | Main | CMS and change: between optimism and pessimism is realism »'. The main content area displays a blog post dated 'January 31, 2007' titled 'Presentation: Information Online 2007'. The post text describes a presentation at the 'Information Online 2007' conference in Sydney, Australia, about 'Intranets as Business Tools'. A link to 'Intranets as Business Tools (PDF, 1.25Mb)' is provided. The post is attributed to 'jamesr' and categorized under 'Conferences & presentations'. On the right side of the page, there is a 'CATEGORIES' list with various topics and their counts, such as 'Area Health Service project(13)', 'Book & product reviews(15)', 'Conferences & presentations(106)', 'Content management(467)', 'Design & usability guidelines(27)', 'Document & records management(7)', 'E-learning(24)', 'Information architecture(371)', 'Information management(35)', 'Interface design(33)', 'Intranets(361)', 'James' articles(89)', 'Knowledge management(406)', 'Metrics & ROI(34)', 'Search tools(68)', 'Usability & user-centered design(428)', 'Web development(71)', 'Weblogs(54)', and 'XML(95)'. At the bottom, there are links for 'SYNDICATE XML' and 'ARCHIVES'.

Column Two: Presentation: Information Online 2007 - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites 11 blocked Check Settings

Address http://www.steptwo.com.au/columntwo/archives/002355.html

Google Information Online 2007 Bookmarks 11 blocked Check Settings

COLUMN TWO
News and opinion on all things KM & CM

Written by James Robertson
Step Two Designs

« How to hire an intranet manager | Main | CMS and change: between optimism and pessimism is realism »

BACK TO MAIN PAGE...

CATEGORIES

- Area Health Service project(13)
- Book & product reviews(15)
- Conferences & presentations(106)
- Content management(467)
- Design & usability guidelines(27)
- Document & records management(7)
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- Knowledge management(406)
- Metrics & ROI(34)
- Search tools(68)
- Usability & user-centered design(428)
- Web development(71)
- Weblogs(54)
- XML(95)

SYNDICATE XML

ARCHIVES

January 31, 2007

Presentation: Information Online 2007

Yesterday I gave a presentation at the **Information Online 2007** conference being held in Sydney, Australia. The topic for my talk was "Intranets as Business Tools", covering the evolution of intranets and the need to find a new metaphor for intranets.

As is usual for me nowadays, the presentations are mostly images, but it will give you a general idea of what I was on about.

[Intranets as Business Tools](#) (PDF, 1.25Mb)

Posted by jamesr on January 31, 2007 12:09 PM
Categories: [Conferences & presentations](#)

Wisdom of Crowds

New publishing methods that utilize shared spaces

- Wikis, Facebook, MySpace, YouTube, Flickr, del.icio.us, Twitter, Wikipedia, etc., etc.

Need we say more?

This has produced an explosion of content!

Social Navigation Pathways

del.icio.us
social bookmarking

» all your bookmarks in one place
» bookmark things for yourself and friends
» check out what other people are bookmarking

learn more... » get started «

hotlist what's hot right now on del.icio.us

HOT NOW

see also: popular | recent

Woody Allen's typography — Kit-blog — Cristian ·Kit· Paul save this 106 people tags
first posted by beetle78 typography film design movies woodyallen

Culinary Seductions save this 126 people tags
first posted by dv82 cooking food recipes dating howto

Secure String Interpolation save this 110 people tags
first posted by dion javascript security string interpolation programming

thumbnail coming soon

12 Things I Learned By 42 That I Wish I Knew At 22 | The Wisdom Journal save this 153 people tags
first posted by vishwas advice lifehacks life wisdom inspiration

tags to watch

projects
DIY RC Lawnmower
Declutter Your Desk
Tesla_coil_sparks

media
Democracy - Internet TV Platform - Free
Theodore Watson - GRL Laser Tag Rott
source code
Creative Commons

library
Rectangular Marquee Tool
Yahoo! User Interface Library
yii-ext Documentation Center

chess
ChessProblems
Chess Tactics Server

Sharing Tags

- Organize and share navigation strategies
- Discover topics of interest to a larger audience
- Track Related Items

Tagging as a Social Activity

The screenshot shows a web browser window with a toolbar containing icons for file operations, search, favorites, and social media. The address bar shows "io.us/tag/". The page content includes the del.icio.us logo, a search bar, and a tag cloud. The tag cloud consists of various tags of different sizes, where size indicates popularity. The tags are arranged in a grid-like fashion, with some tags being larger and more prominent than others. The tags include: .net, 2008, advertising, ajax, apple, architecture, art, article, au, audio, bandon, bandslash, blog, blogging, blogs, books, business, community, computer, cooking, cool, css, culture, design, development, diy, download, downloads, education, electronics, entertainment, environment, fanfic, fic, film, finance, firefox, flash, food, forum, free, freeware, fun, funny, gallery, game, games, google, graphics, gtd, hardware, health, history, home, howto, humor, illustration, images, imported, inspiration, interesting, internet, java, javascript, jobs, knitting, language, learning, library, lifehacks, linux, literature, mac, marketing, math, mcr, media, microsoft, mobile, movies, mp3, music, network, news, online, opensource, osx, photo, photography, photos, photoshop, php, politics, portfolio, productivity, programming, python, radio, rails, recipe, recipes, reference, religion, research, resources, ruby, school, science, search, security, sga, shopping, slash, social, software, statistics, tech, technology, tips, tools, toread, travel, tutorial, tutorials, tv, ubuntu, usa, video, visualization, web, web2.0, webdesign, webdev, wedding, wiki, windows, wordpress, writing, yahoo, youtube.

io.us/tag/

del.icio.us / tag /

popular | recent
login | register | help

Popular tags on del.icio.us del.icio.us

This is a tag cloud - a list of tags where size reflects popularity.
sort: alphabetically | by size

.net 2008 advertising ajax apple architecture art article au audio bandon bandslash blog blogging blogs books
business community computer cooking cool css culture design development diy download downloads education
electronics entertainment environment fanfic fic film finance firefox flash food forum free freeware fun funny gallery game
games google graphics gtd hardware health history home howto humor illustration images imported
inspiration interesting internet java javascript jobs knitting language learning library lifehacks linux literature mac
marketing math mcr media microsoft mobile movies mp3 music network news online opensource osx photo
photography photos photoshop php politics portfolio productivity programming python radio rails recipe
recipes reference religion research resources ruby school science search security sga shopping slash
social software statistics tech technology tips tools toread travel tutorial tutorials tv ubuntu usa video
visualization web web2.0 webdesign webdev wedding wiki windows wordpress writing yahoo youtube

Why is Like.com Different?

Like is a visual shopping engine that lets you find items by color, shape and pattern.

Click on [Likeness Search](#) to get started

Visual Search: Like.com

Right Brained Search:

- User Defined Relevance
- Track likenesses
- Sliders Define Query Parameters
- Color Palette
- Faceted Browse

Which Aspect of this Item is Most Important?

Color Shape Pattern

My LikeList

View all items in LikeList (Login | Register)

What is Your Price Range?

\$ 130 \$ 1094

Apply Reset

Any Specific Color?

Show Only

Clear All

| Brand | Site |
|----------------------|--------------------|
| Donald J.P... (1219) | Zappos.com (16050) |
| Stuart Wei... (1040) | YOOX.COM (3717) |
| Via Spica (763) | NORDSTROM (1041) |

This item is no longer available. Scroll down to see similar shape, and pattern.

Search Results

Sort By: [LikenessSM](#) [Price](#) Change Your View: [Grid](#) [List](#)

Timberland - FC Flora Tall Boot
a stylish tall boot with an inspired design. burnished, full-grain premium leather uppers. handcrafted leaf etchings reveal rich color accents. full rear zip for convenience. comfortoria comfort system is a contoured, multi-density footbed that provides comfort.

[More Details](#) [Save to LikeList](#)

JIL SANDER - Women - FOOTWEAR - Boots on YOOX.COM
Textured leather - Leather/rubber sole

[More Details](#) [Save to LikeList](#)

Etienne Aigner - Cailyn
gorgeous riding-style boot with decorative strap and buckle. smooth leather or logo fabric upper. inside zip closure. lightly padded footbed. man-made sole.

[Compare Prices](#) [More Details](#) [Save to LikeList](#)

Free Shipping
Available

Intuitive Visual Cues Instead of Keywords


Right Brained Search:

Which Part of the Image Do You Like?

Why is Like.com Different?
Like is a visual shopping engine that lets you find items by color, shape and pattern.
Click on [Likeness Search](#) to get started

Your Search Item

Which part of the image do you like?
Draw a box on the item to focus your search on that area.



KORS Michael Kors - Loony
\$309.36
[More Details](#) + [Save to LikeList](#)
[Shop at Zappos.com](#)

All Products > [Shoes](#) > [Women's Shoes](#) > [KORS Michael Kors](#) > KORS Michael Kors

Search Results

Sort By [LikenessSM](#) [Price](#) Change Your View: [Grid](#) [List](#)

Lumiani - Roma
the roma offers a fresh look with it's rear facing zipper a lines. leather upper and shaft, leather lining. rivets on the leather sole. made in italy.
[More Details](#) [Save to LikeList](#)

VIC MATIE' - Women - FOOTWEAR - Boots on YOOX.COM
Leather/rubber sole - Contrasting applications details - Stitch detailing - Etchings -
[More Details](#) [Save to LikeList](#)

Martinez Valero - Bosa
sleek and flattering full shaft boot. leather upper. side zip entry. lightly padded footbed. leather outsole.
[More Details](#) [Save to LikeList](#)

Shop for more items like this:
[Likeness Search](#)

\$228.00
[Shop at YOOX.COM](#)

Shop for more items like this:
[Likeness Search](#)

\$193.00
[Shop at Zappos.com](#)
Free Shipping Available

Shop for more items like this:
[Likeness Search](#)

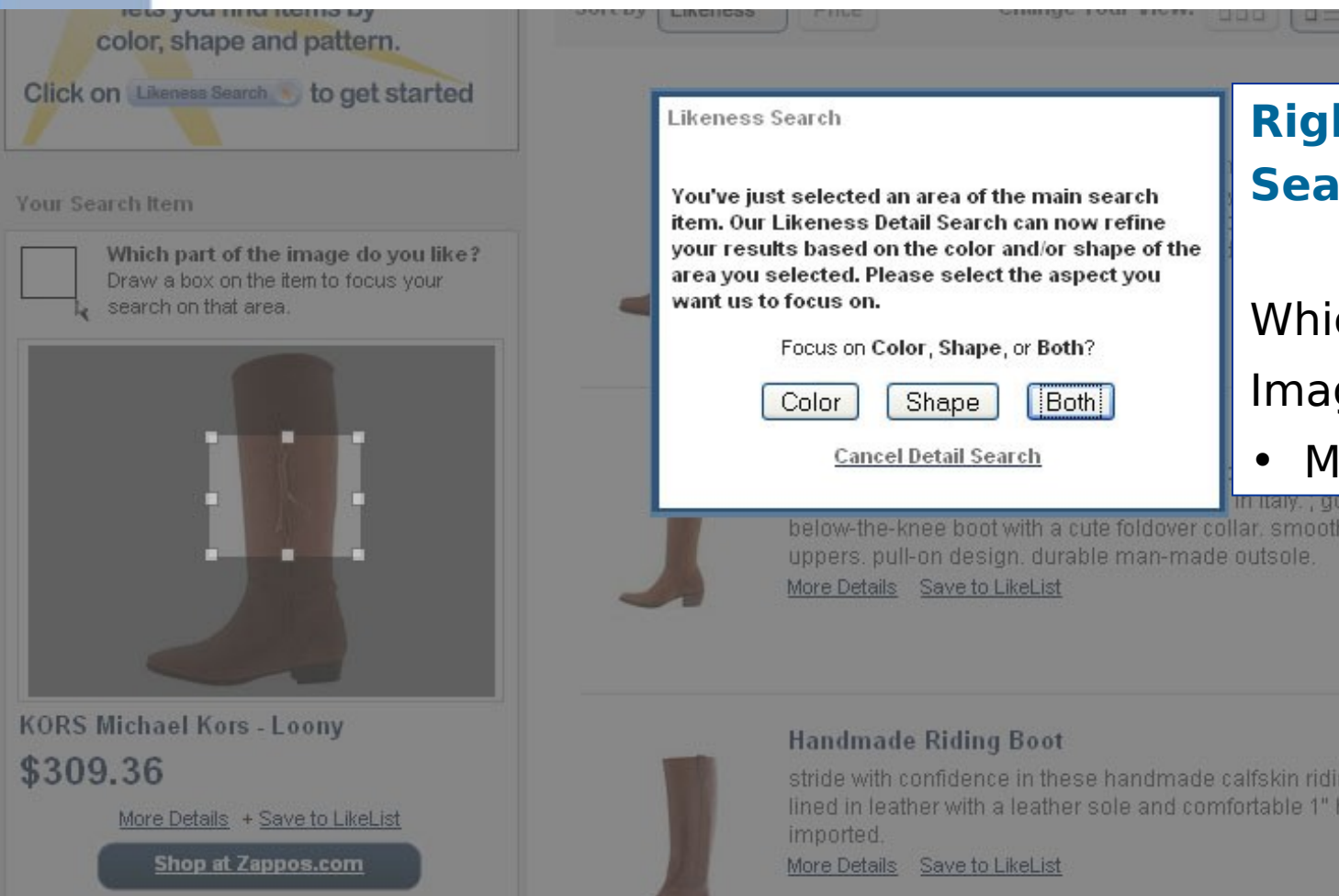
Navigation by Image Selection

lets you find items by color, shape and pattern.

Click on **Likeness Search** to get started

Your Search Item

Which part of the image do you like?
Draw a box on the item to focus your search on that area.



KORS Michael Kors - Loony
\$309.36
[More Details](#) + [Save to LikeList](#)
[Shop at Zappos.com](#)

Handmade Riding Boot
stride with confidence in these handmade calfskin ridin
lined in leather with a leather sole and comfortable 1" h
imported.
[More Details](#) [Save to LikeList](#)

Right Brained Search:

Which Part of the Image Do You Like?

- More refinement

Search Evolution

Okay, that was on the Internet,
But what about **inside** the Enterprise?
Yep, we've got it.

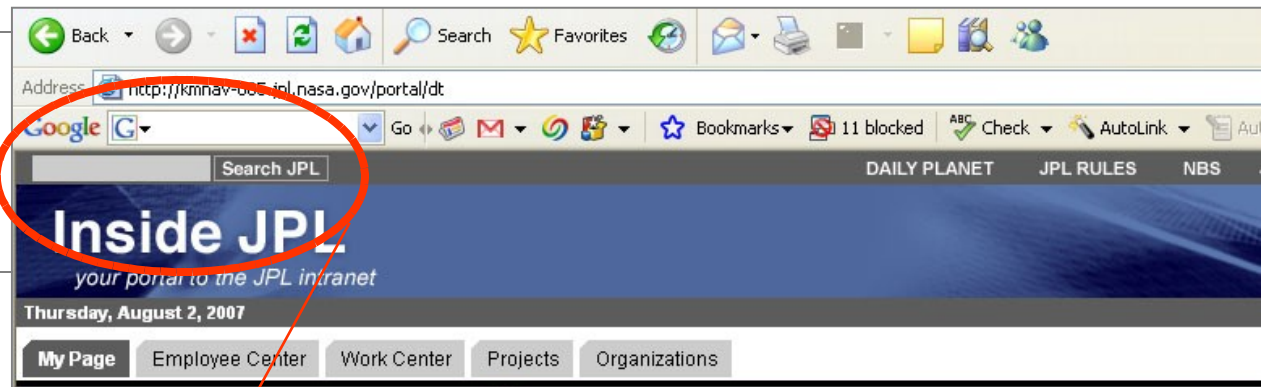
Blogs, wikis, community portals, folksonomies,
the need for increased personal dashboard
reporting, RSS subscription, shared searches
across repositories, all kinds of data formats
and content items – Yikes!

Rethinking Search

*How can we adapt some of
the ideas that are out on
the Web for Enterprise
Search?*

Search in a Box is So Last Millennium

Enterprise Search 1.0



Daily Planet


Phoenix launch Saturday (posted July 13, 2007)
The launch of JPL's Phoenix spacecraft has been rescheduled for Saturday, Aug. 4. For current information on launch status, go to the JPL home page.

Two join astronautics academy (posted August 1, 2007)

Phoenix press briefing today (posted July 31, 2007)

Labwide Announcements

- Pepperdine University Graziadio School of Business and Management Information Session, August 7
- Fidelity Investment Workshop: "Achieving a Sound Retirement," August 8
- Electronic Journals at the JPL Library
- August Blood Drive: August 14, 15
- Update Following Meeting Maker Purge
- Travel Application Now Available
- New Employees or Administrators: Enroll Now in Concur
- Travel Request/Expense Training
- New Copiers Coming to JPL



Search Evolution: Breaking Out of The Box

- Search is no longer a box in the corner of a web page
 - Web crawling alone doesn't meet the needs of today's businesses
 - Information objects encompass many formats
 - Relationships and context gain new importance
 - Generating metadata must be part of the work process and transparent to the user
 - New technologies present new opportunities

How Do I Look For Information?

Does Mars Polar Lander =
MPL 98? MPL? Mars PL?

- Terms are used inconsistently
- Terms vary from system to system
- Documents and associated Objects are often separated
 - Search is most often time consuming and unsuccessful
 - Design and engineering rationales frequently lost for mission teams of the future



JPL
UNIFIED
SEARCH
PROJECT

Re-imagining Enterprise Search: The High Level Vision

The user should be able to:

- Search multiple repositories at once quickly and intuitively
- Find an object without having to know where it is stored
- Use key word queries blended with faceted browse navigation to discover both known and previously unknown data
- Save searches and subscribe to them
- Apply personal tags to content, increasing its findability by other team members
- See relationships between items; increased context improves sense-making
- Use a common, familiar data model based on JPL processes when searching across repositories

Use Cases: JPL Engineering Examples

- Mars Science Lab (MSL) Mission Project Manager:
 - “I’d like to see all documents needed to complete my Certification for Flight Readiness and what state they’re in, no matter where they are.”
- Mission Element Manager:
 - “I need to give a regular report on parts drawings and what their status is so we can track progress and stay on schedule for launch.”
- Fabrication Shop Manager:
 - “I need to know the status of drawings so we can be sure to do proper resource planning and be ready to get everything built on time.”
- Scientist/Principal Investigator:
 - “ I want to see what types of data were returned on earlier missions using a particular type of instrument to help me

New Strategies for Enterprise Search

- Search across repositories using a common information model
 - Taxonomies, consistent metadata, information services
 - Semantic Web technologies and analytics allow for mappings, filters and logical extensions at the enterprise level
 - Formalize business process to leverage use case analysis
 - Content life cycles, roles, deconstruction of repeating tasks
 - Know your internal customers, find their pain points
 - Patterns will emerge that indicate use cases and workflow possibilities
 - Prep for inferencing and mash ups

Metadata Development

1. Define use cases
 - Determine questions for data analysis
 - What problem are you trying to solve?
 - What relationships need to be expressed?
2. Design metadata elements to answer relevant questions
 - Write clear definitions for better understanding
 - Some metadata is mandatory, some is ***conditional***
3. If values can be normalized to improve consistency and integrity, consider using controlled vocabulary terms (a taxonomy)

JPL Taxonomy Effort Goals

- Tightly integrated with JPL Metadata Specification Core
 - Provides vocabulary values for the appropriate metadata fields
- Provides a classification scheme for identifying content
 - A means for tagging content so it can be used and reused in different contexts
- Derived from JPL standard gold sources
 - Vocabulary owners are Subject Matter Experts in their domains
 - Taxonomy maintenance delegated to vocabulary owners
- Integrated with the NASA Taxonomy
 - Ensures interoperability across the Agency

Getting from Here to There: Mapping Silo'ed Data Structures to the Enterprise Standard

UIMA = Unstructured Information Management Architecture

Open Software Architecture and Emerging Standard from IBM

Platform independent standard for interoperable text and analytics

In Development: UIMA Standards Technical Committee Initiated by OASIS

http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=uima

Software Framework Implementation: SDK Available on IBM

Analytics: The Kinds of Things They Do

- Independently developed
- From an increasing # of sources

Analysis Capabilities

- Language, Speaker Identifiers
- Tokenizers
- Classifiers
- Part of Speech Detectors
- Document Structure Detectors
- Parsers, Translators
- Named-Entity Detectors - Taxonomies
- Relationship Detectors

- Different technologies & interfaces

Highly specialized & fine grained Capability Specializations

- Modality
- Human Language
- Domain of Interest
- Source: Style and Format
- Input/Output Semantics
- Privacy/Security
- Precision/Recall Tradeoffs
- Performance/Precision Tradeoffs...

*The right analysis for the job will likely be a **best-of-breed combination** integrating capabilities across many dimensions.*

Some UIMA Architecture Terms

Aggregate Analysis Engine

Contains a collection of component Analysis Engines

Analysis Engine

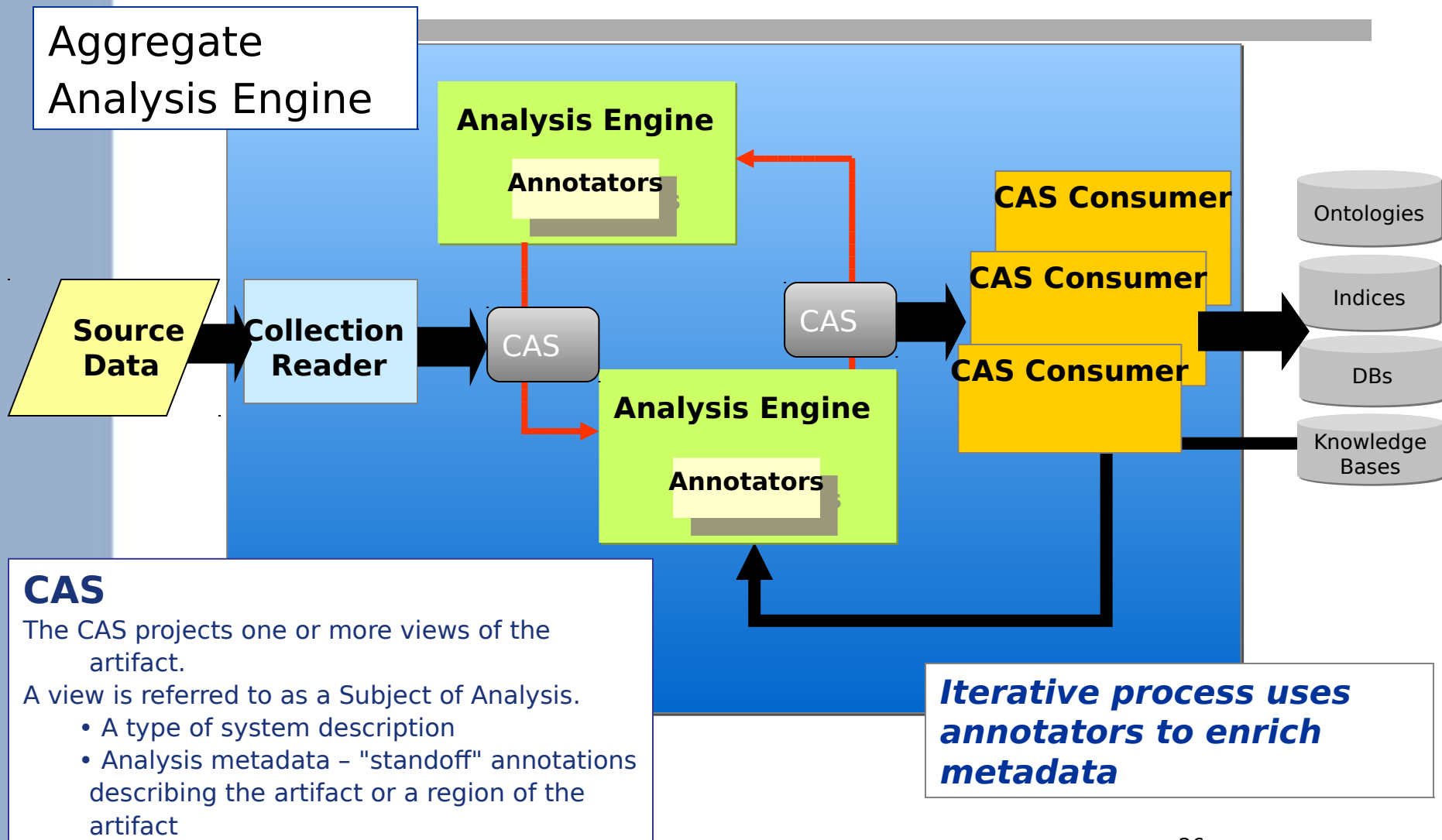
A program that analyzes artifacts (e.g. documents) and infers information about them, and which implements the UIMA Analysis Engine interface Specification.

Annotator - A software component that implements the UIMA annotator interface. Annotators are implemented to produce and record annotations over regions of an artifact

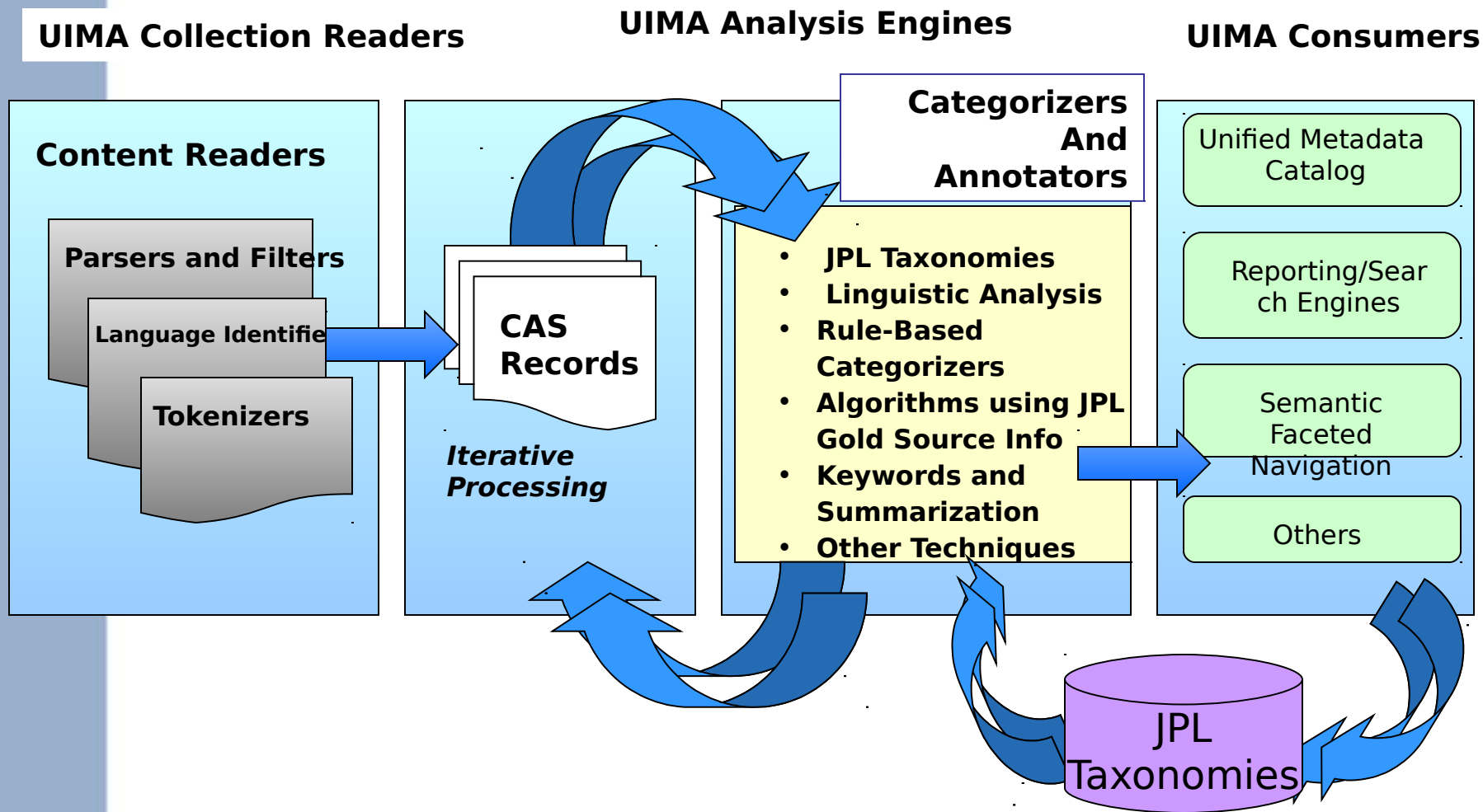
CAS - Common Analysis Structure

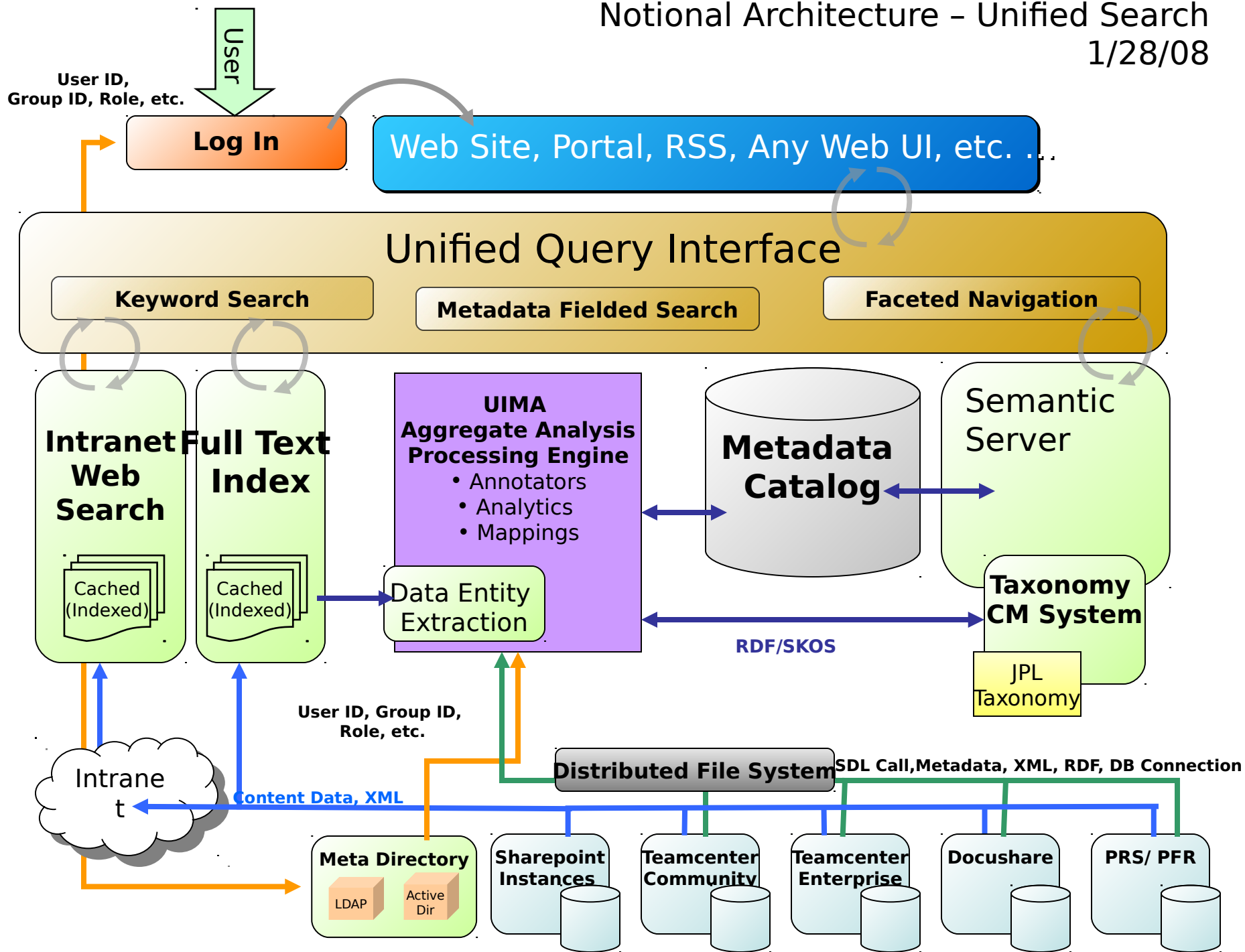
The information object being analyzed

Generic UIMA Analysis Process



UIMA Framework and JPL Unified Search Mapping





Search Designed by the User

- Pick the search parameters that are of interest
- Save the query
- See the results in text or in pictures
- Subscribe to the search by RSS feed
- Drop the search into your community portlet or wiki page
- Share the query with your team
- Change or add parameters any time

Unifying Data for Increased Browse-ability Using Faceted Navigation

Powered by: Search

19,137 Unified Drawing Searches

| by Repository | |
|------------------------|-------|
| Teamcenter Community | 2417 |
| Teamcenter Engineering | 4198 |
| Teamcenter Enterprise | 14971 |

| by Drawing Tree | |
|-------------------------|------|
| MSL Science Payload | 133 |
| MSL Spacecraft Assembly | 8556 |

| by Subsystem | |
|-----------------|------|
| Bud | 118 |
| Descent Stage | 1071 |
| Rover Mobility | 533 |
| Rover Structure | 696 |

| by Part Status | |
|----------------|------|
| Complete | 65 |
| In Fabrication | 10 |
| In Inspection | 2 |
| Not Started | 1357 |

| by Status | |
|------------------------|------|
| Allocated | 4101 |
| Assigned | 9068 |
| Frozen | 211 |
| In Approval | 85 |
| In Revision | 24 |
| In Work | 128 |
| Not Started | 1483 |
| Released | 88 |
| Released for Build Buy | 896 |
| Released for Final | 985 |
| 9 more | |

| by Cognizant Engineer | |
|-----------------------|------|
| Angel Garnica | 441 |
| Benjamin L Thoma | 541 |
| Benjamin Thoma | 1745 |
| Mau-Huu Tran | |
| Michael A Etters | |
| Neil Dahya | |
| Peter Illsley | |
| amaggie | |
| bkennedy | |
| ljandura | |
| 178 more | |

| by Designer | |
|----------------|------|
| Chi-Man E Lau | 988 |
| Eric Kurtzweil | 674 |
| Kevin Tan | 1436 |

| by Revision | |
|-------------|-------|
| A | 14970 |
| B | 501 |
| C | 164 |

MSL Drawings Query Sample

- By Repository
- By Drawing Tree
- By Subsystem
- By Status
- By Designer/Cognizant Engineer

Search Should be Intuitive

The screenshot shows a web-based search interface. At the top right, there is a 'Go' button with a green arrow and a 'Links' link. Below this, the user is logged in as 'administrator' with a 'Log Out' link. The search section is highlighted by a red dashed oval and contains two search methods: 'Search by Metadata' with a text input field and a dropdown menu set to 'All Fields', and 'Search by Keyword & Full Text' with a text input field. Both methods have a 'Find' button. Below the search section, there is a dark blue bar with the text 'Powered by: Seamark'. At the bottom, there are three facet panels: 'by Organization' showing '17 - Office of the Chief In...' with a count of 7085, and 'by Mission Phase' showing 'Phase A' with a count of 2121. A third facet panel on the left is partially visible, showing 'nce' with a count of 473.

Search Strategies

- Browse by Facet (not sure what you're looking for)
- Query by Metadata Field (when one fact or attribute is known)
- Keyword and Full Text (for references in related documents)

Managing Results Views

SEAMARK NAVIGATOR

Logged in as **administrator** [Log Out](#)

Search by Metadata: All Fields

Search by Keyword & Full Text:

Powered by: Seamark

691 Objects

Restart

☒ Text of Document contains Critical Design Review

☒ Mission / Project: [Mars Missions / Program Of fice](#) > Mars Exploration Rover

☒ Content Type: Review Package

by Collection

| | |
|------------------------------|-----|
| Controlled D...ecords (CD&R) | 691 |
|------------------------------|-----|

by Organization

| | |
|------------------------------|-----|
| 101 - Senior...Review Office | 1 |
| 11 - Human Resources | 1 |
| 17 - Office ...ation Officer | 13 |
| 2x - Business Operations | 3 |
| 3x - Engineering and Science | 433 |
| 4x - Solar System | 7 |

Content Type Most Relevant Pivot to: < Previous Groups 1-1 of 1 [Next >](#)

☐ Tag All All 691 matching items using:

Review (691 items in group)

☐ [Flight System Implementation Status Review](#)
Relevance: 0.5726408362388611
Repository: [DocuShare](#)
Collection: [CD&R - MER Flight System Implementation Status Review 08/10/01](#)
Mission / Project: Mars Exploration Rover
Mission Phase: [Phase C/D](#), [Phase C/D](#)
Content Type: [Review](#)
File Format: application/vnd.ms-powerpoint
Document State: [Official](#)
System / Subsystem: [Flight System](#), [Ground Support Equipment](#), [Integration and Test Equipment](#), [Payload](#), [Flight Hardware](#), [Flight Software](#), [Guidance](#), [Navigation and Control](#), [Harness](#), [Mechanisms](#), [Power](#), [Propulsion](#), [Structures](#), [Telecommunications](#), [Thermal](#), [Fault Protection](#), [Entry](#), [Descent and Landing System](#), [Cruise and Entry](#), [Descent and Landing Testbed](#), [Panoramic Camera](#), [Rover](#)
Sensitivity: [Not Assessed](#)
Date: August 10, 2001
Instruments: [Rock Abrasion Tool](#), [High Gain Antenna](#), [Low Gain Antenna](#)
Competency: [Engineering](#), [Science](#), [Avionics](#), [Mission](#), [Technical](#), [Business](#)
Subject: [Engineering](#), [Space Communications](#), [Spacecraft Communications](#), [Command and Tracking](#)

390 IT Portfolio Items Save Results As: Select A Format

by Strategic Goal or not and

- ☐ Access 35
- ☐ Collaboration 27
- ☐ Compliance 29
- ☐ Effective IT 131
- ☐ IT efficiency 40
- ☐ Information reuse 34
- ☐ Management o...T leadership) 9
- ☐ Reliability 15
- ☐ Security 9
- ☐ Sustaining, maintenance, other 69

[1 more](#)

by Organization or not and

- ☐ 11 - Human Resources 15
- ☐ 17 - Office ...ation Officer 249
- ☐ 2K - Business Operations 123
- ☐ 3K - Engineering and Science 3
- ☐ 5K - Office ...ission Success 1

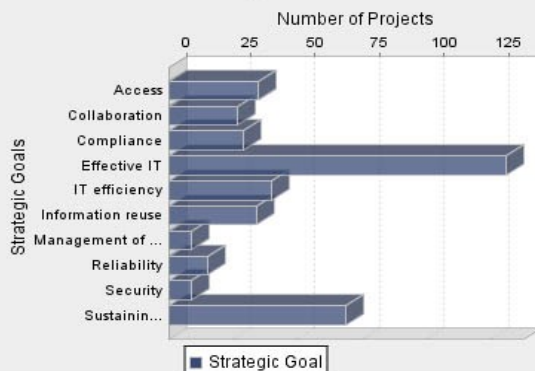
by Commitment State or not and

- ☐ Booked 165
- ☐ Cancelled 3
- ☐ Complete 57
- ☐ Future 101
- ☐ Pre-proposal 17
- ☐ Rated 25
- ☐ Rejected 16
- ☐ Unknown 6

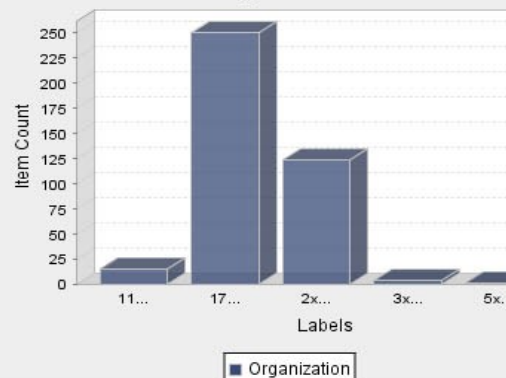
by Investment Domain or not and

- ☐ Enhancement 214
- ☐ Frontier 3
- ☐ Maintenance 36
- ☐ Utility 137

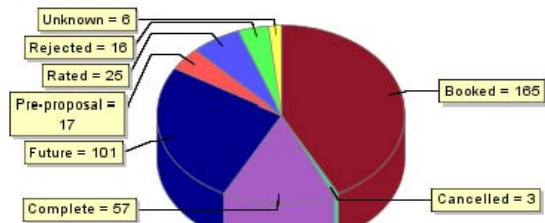
Strategic Goal



Organization

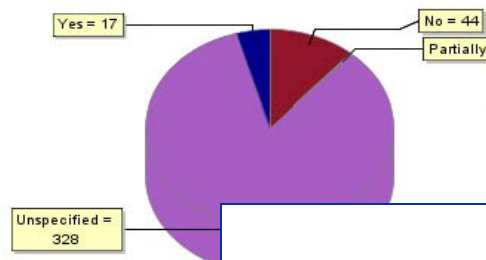


Commitment State



Booked = 165 Cancelled = 3 Complete = 57 Future = 101
Pre-proposal = 17 Rated = 25 Rejected = 16 Unknown = 6

Funded



Unspecified = 328
No = 44 Partially =

Primary Service - asc < Previous Results 1-20 of 390 Next >

| View | Edit | Work Item Name | Project Number | Primary Service | Strategic Goal | Organization | End Date | Commitm State |
|----------------------|----------------------|---|----------------|-----------------|------------------------------|--------------|-------------|--------------------------|
| View | Edit | FY08 Subcontractor Wizard Replacement | 3303 | Acq | Effective IT | | | Rejected |
| View | Edit | iProcurement Phase 2 Return capability implement plus Asset Interface | 3170 | Acq | Effective IT | | Jun 30 2007 | Active |

Have it
Your Way:
Personalized
Dashboards

Change Your Viewpoint by Pivoting on Metadata Relationships

| Assigned | 1981 |
|------------------------|------|
| Frozen | 18 |
| In Approval | 7 |
| In Revision | 24 |
| In Signature | 10 |
| In Work | 127 |
| Not Started | 1483 |
| Released | 88 |
| Released for Build Buy | 22 |
| Released for Final | 61 |
| 2 more | |

| by Cognizant Engineer | |
|-----------------------|-----|
| Benjamin D Riggs | 200 |
| Benjamin L Thoma | 773 |
| Daniel M Coatta | 88 |
| John J Quicksall | 27 |
| Matthew D Spaulding | 27 |
| Michael A Etters | 350 |
| Michael J Gradziel | 74 |
| Michael W Shafer | 30 |
| Peter M Illsley | 681 |

| | |
|--------------------------|--|
| <input type="checkbox"/> | <p>Cover, Drive Cable Exit Drawing Number: 10274497, 10274497 Repository: Teamcenter Community, Teamcenter Engineering Drawing Link... Subsystem: Rover Mobility Part Status: Not Started Project: Mars Science Laboratory, Mars Science Laboratory DWG Status: Not Started, Frozen Cognizant Engineer: Sean J Haqqart Q Designer: Albert H T Category: Wheel Cor Drawing Type: PART Next-Assembly: Mo Parent: 10274497-1/ Modified Date: 31-M Part ID: 10274497-D Dataset Type: Unigra Owner: Albert H Tran Tag it</p> |
| <input type="checkbox"/> | <p>SHIM, WHEEL RES Drawing Number: 10 Repository: Teamce Drawing Link... Subsystem: Rover M Part Status: Not Sta Project: Mars Scienc DWG Status: Not Sta</p> |

| Drawing |
|--|
| <p>Mobility Assembly, MSL ROVER MOBILITY DRAWINGS Drawing Number: 10253201, 10253201 Repository: Teamcenter Community, Teamcenter Enterprise Drawing Link..., Drawing Link... Subsystem: Rover Mobility DWG Tree Location: Rover Mobility Installation, Rover Mobility Installation Mission Phase: Pre ATLO Part Status: Not Started Project: Mars Science Laboratory, Mars Science Laboratory Create Date: 2005/05/25-15:43:21:001 Number of Files: 0 DWG Status: In Work, Assigned Designer: Darrin J Tidwell Q Revision: A Category: Top Assembly Drawing Type: ASSY Next-Assembly: Mobility Assembly Installation Q</p> |

Personal Tagging : Creating Folksonomies for Team Use





by DWG Status

| | |
|------------------------|------|
| Assigned | 1981 |
| Frozen | 18 |
| In Approval | 7 |
| In Revision | 24 |
| In Signature | 10 |
| In Work | 127 |
| Not Started | 1483 |
| Released | 88 |
| Released for Build Buy | 22 |
| Released for Final | 61 |
| 2 more | |

by Cognizant Engineer

| | |
|------------------|-----|
| Benjamin D Riggs | 200 |
| Benjamin L Thoma | 773 |

Tag it

☐ **Cover, Drive Cable Exit**
Drawing Number: 10274497
Repository: Teamcenter Community, [Teamcenter Engineering](#)
[Drawing Link...](#)
Subsystem: [Rover Mobility](#)
Part Status: [Not Started](#)
Project: [Mars Science Laboratory](#)
DWG Status: [Not Started](#), [Frozen](#)
Cognizant Engineer: [Sean J Haggart](#) 
Designer: [Albert H Tran](#) 
Category: Wheel Components
Drawing Type: PART
Next-Assembly: Mobility Assembly 
Parent: 10274497-1/A
Modified Date: 31-May-2007 14:59
Part ID: 10274497-DWG
Dataset Type: Unigraphics PART
Owner: [Albert H Tran](#) 

Add Tag **Save** **Cancel**

Site Map

NAVIGATE BY

MISSION PHASE

A (50)
B (79)
C (23)
D (0)
E (0)

REPOSITORY

DocuShare (5)
Teamcenter Engineering (121)
Teamcenter Enterprise (522)
Sherpa (200)
iPICS (105)

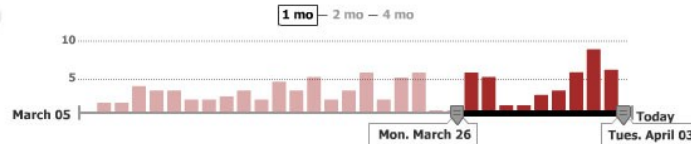
Next Generation Team Collaboration Platforms

FILTER

CONTENT TYPE
Drawing

WBS
Payloads

RELEASE TIME PERIOD

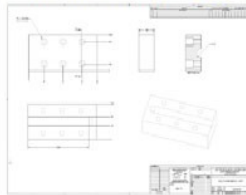


KEYWORDS

MICD mission plan Test Plan Analysis FMECA ATLO Mission System Test actuators FS mechanical system PDR flight system hardware
QA fasteners AIDS class B drawings redline drawings RFAs ECRs HRCR interface agreements

RESULTS

10 Results of 130 page 1 2 3 4 5 6 7 8 9 10 ... Next

**Solithane Mold, Left**

Author: William Allen

Drawing Number: 10259107

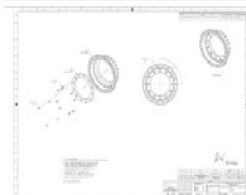
Designer: Justin Li

Release Date: 2007/03/26

Status: Release for Build

Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum

[RSS](#) [Focus](#)

**Motor Actuator, Flex Spine**

Author: Richard Frankos

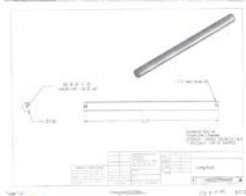
Drawing Number: 103104 A,2

Release Date: 2007/03/26

Status: Release for Build

Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum

[RSS](#) [Focus](#)

**Flex Bender Plug**

Author: Horatio Sanzebar

Drawing Number: 102414 C,1

Release Date: 2007/03/26

Status: Release for Final

Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum

[RSS](#) [Focus](#)

**Retaining Plate, Inner**

Author: Megan Thurmer

MY SEARCHES

My Collection

To Review

PTTR Subsystem Drawing
ASME Y14.100M, 1998
Limited Dimension Drawings, Spec
GLR Flex Spectrometer Drawing
Spectrometer Discussion List

SHARED SEARCHES

COMMUNITY

MSL GENERAL

Engineering Drawings - STD 00001
Thermal Properties of Titanium
Failure Analysis of Titanium Fasteners
Vibration in NASA Launch Vehicles
MSL Mechanical Subsystems Materials Plan
MSL Payload Mass Estimates Matrix

MSL ELECTRICAL

GUIDELINES & STANDARDS

ENGINEERING/TECHNICAL

JPL Engineering Drawing Practices
ASME Y14.100M, 1998
Limited Dimension Drawings, JPL Spec FS 5172223
Use of Unrelease Drawing

JPL

Showing:

- Saved searches
- Team searches
- Subscribed searches
- Search by sliding parameter scale
- Faceted navigation for browse

Site Map

NAVIGATE BY

MISSION PHASE

A (50)
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C (23)
D (0)
E (0)

REPOSITORY

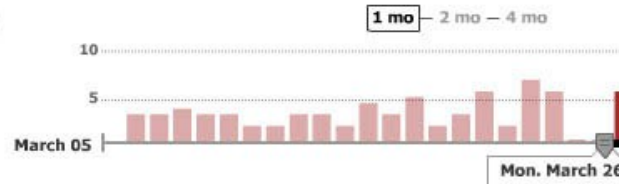
DocuShare (5)
Teamcenter Engineering (121)
Teamcenter Enterprise (522)
Sherpa (200)
IPICS (105)

FILTER

CONTENT TYPE
Drawing

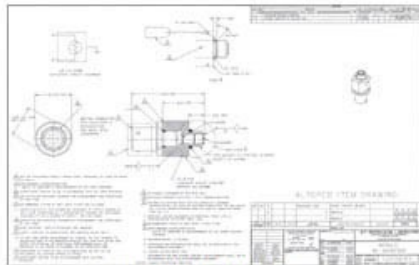
WBS
Payloads

RELEASE TIME PERIOD



KEYWORDS

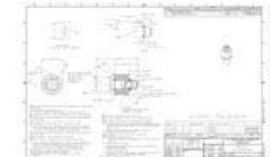
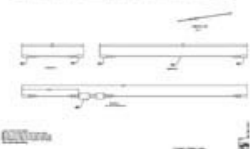
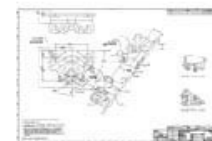
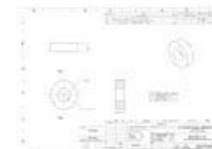
MICD mission plan Test Plan Analysis FMECA ATLO Mission System Test actuators FS mechanical system PDR flight system
drawings redline drawings RFAs ECRs HRCR interface agreements



Title: Module NSI Booster
Drawing Number: 1011645
Author: Berglund
Published: 2002-03-24



6 7 8 9 10 ... Next



MSL Document Tree

Navigate by Image
See related:

- Parts, Test Results,
- Liens, Waivers,
- Requirements and more

Site Map

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A (50)
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DocuShare (5)
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Sherpa (200)
IPICS (105)

FILTER

CONTENT TYPE

Drawing

+

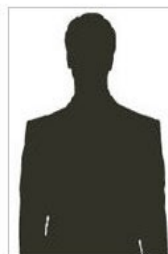
WBS

Payloads

RESULTS

Title: Software Model
Author: William C Allen
Drawing Number: 125-14R
Copyright: JPL/NASA
(Design: JPL/NASA
Classification)

Person: William C Allen

**E-mail:** William.C.Allen@jpl.nasa.gov**Office Location:** 125-14R**Department Name:** 352K Spacecraft Design Engineering**Projects worked on:** MSL Q, MER Q**Waivers Mentioned:** 503165 Q, 512644 Q**Other Related Records Mentioned:**

10259107 Q, 1026598 Q, 1026697 Q

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ASME Y14.100M, 1998
Limited Dimension Drawings, Spec
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MSL Payload Mass Estimates Matrix

MSL ELECTRICAL

GUIDELINES & STANDARDS

ENGINEERING/TECHNICAL

JPL Engineering Drawing Practices
ASME Y14.100M, 1998
Limited Dimension Drawings, JPL Spec FS

Look At Multiple Objects in Context

- Includes data on people, projects as well as engineering products
- Modern visualization and improved interface

Summing Up

- Web 2.0 presents many new opportunities to redesign search
- What's new is socialization and increased interactions between content and people
- Context gains importance
 - Relationships help establish context
- We used to call it search; now we say:
 - Enabling social networking across teams
 - Information discovery without having to know an exact key word
 - Personal reporting quickly designed and easily accessible
 - Flexible graphics and sexy interfaces that resonate with the iPod generation

Questions and Discussion

*Thanks for your time and
interest!*

Jayne.E.Dutra@jpl.nasa.gov

Back Up Information

Enterprise Data Integration Using UIMA

Open Software Architecture and Emerging Standard from IBM

Platform independent standard for interoperable text and analytics

Under Development: UIMA Standards Technical Committee
Initiated under OASIS

http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=uima

Software Framework Implementation

SDK Available on IBM Alphaworks

<http://www.alphaworks.ibm.com/tech/uima>

Tools, Utilities, Runtime, Extensive Documentation

Creation, Integration, Discovery, Deployment of analytics
Java, C++, Perl, Python (others possible)

Supports co-located and service-oriented deployments
(eg., SOAP)

x-Language High-Performances APIs to common data